

## EDUCATION

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**Nanyang Technological University, Singapore**

Aug 2020 – Jun 2024 (Expected)

- **Bachelor of Engineering (Electrical and Electronic Engineering)**
- **Honours (Distinction)** (Expected); current CGPA : 4.01 / 5.00
- Specialization: Semiconductor Devices and Processing
- NTU President Research Scholar (2022 and 2023)
- Relevant Modules: (1) Advanced Wafer Processing (2) Integrated Circuit (IC) Packaging (3) CMOS Process and Device Simulation by Technology CAD (4) Device Parameter Extraction and Layout Implementation (5) Quantum Mechanics.

## WORK EXPERIENCE / INTERNSHIP

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**Process Engineering Intern**, InchFab, Inc., Sunnyvale California USA

Jan 2023 – Jul 2023

- Designed and implemented a magnetic plasma confinement system improving efficiency and consistency of wafer deposition and etching machines.
- Designed a radio-frequency phase shifting signal generator circuit and PCB.
- Operated PECVD & RIE machines, optical metrology tools for wafer inspection and wafer spin-coating.
- Programmed various software and firmware communication protocols, user interfaces, and data analysis & processing scripts.
- Implemented IoT sensors and remote monitoring dashboard.
- Contributed to ideation and design of company SQL database software for wafer process logging.
- Assisted in start-up operations ranging from training new team members to networking at various conferences.

**Research Assistant**, The Nam Research Group, Singapore

Aug 2021 – Jan 2023

- Researched and developed strain engineered two-dimensional materials to create single photon emitters for photonics based quantum computing processors.
- Developed optical bench set-up for laser photonic sample excitation and measurement of spectrum, lifetime and second order correlations.
- Presented research poster at Photonics@SG 2022 conference by LUX Photonics Consortium.
- Awarded **1<sup>st</sup> Prize** for research poster in NTU DISCOVER URECA 2023 competition.

## ACADEMIC PROJECTS

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NTU Design and Innovation Project: **Upgrading ESP32 Game Controller Device**

Aug 2022 – Nov 2022

- Led a team 7 members.
- Ideated and developed a new system for solving server latency issues for an ESP32 microcontroller product by rerouting data communication through a mobile phone.
- Successfully developed interfacing mobile application and server database management tools.
- Received A grade for project assessment.

NTU Academic Project: **Audio Amplifier System**

Jan 2022 – Mar 2022

- Successfully developed audio amplifier system prototype with automatic volume control, implemented using analog electronics components, simulation software and electronics prototyping board.
- Received A grade for project and lab assessment.

NTU Academic Project: **Analysis of COVID-19 Impact on Stock Prices**

Sep 2021 – Oct 2021

- Developed a python script to web scrape data from a stock finance website.
- Analysed stability of stock price, and associated company factors through numerous different machine learning models and regression models.

- Discovered simpler method to predict a variable normally computed over 5 years from just 6 key data points.
- Received A grade for project and lab assessment.

Hobby Project: **3D Graphics Engine in C++**

Apr 2019

- Programmed software and derived all algorithms (with no references) from scratch, for a 3D graphics engine, as a hobby project in a one month timeframe.
- Software is capable of displaying virtual 3D graphics with perspective freedom and basic 3D modelling functions were programmed as well.
- Created touch user interface for use on classroom monitors.
- Integrated into an atomic force simulator code (for discovering stable chemical bond shape.)

## **CO-CURRICULAR ACTIVITIES**

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**President, NTU Ballroom Dancing Club 2022** Led a ten member committee, facilitated communication between all stakeholders, secured \$5,000 annual funding, achieved significant club growth through restructuring, and successfully organized ballroom dancing workshops for over hundreds of participants.

## **SKILLS / INTERESTS**

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**Languages** English, Mandarin Chinese, Hindi, Telugu, Kannada, Tamil.

**Software and Tools** VacTran, COMSOL, FEMM. LabVIEW. KiCAD. LTspice. MySQL. Excel. 3D Printing. Surface Mount Soldering. Product Machining. C++. C. Python. Java.

**Interests** Science Fiction Novels, Calisthenics and Fitness, Arts and Crafts – Dance, Origami, etc, Cooking.